

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To:
MACRAE & CO.
P.O. Box 806
Station B
OTTAWA, Ontario
Canada, K1P 5T4

DOCKETED

CLIENT *Entrust*
FILE NO. *1050233.05TT*

DUE DATE *5/30/07*
Response to Search Report
BY *1/16/07* DATE *7/18/07*

PCT

NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL SEARCH REPORT AND
THE WRITTEN OPINION OF THE INTERNATIONAL
SEARCHING AUTHORITY, OR THE DECLARATION

(PCT Rule 44.1)

Applicant's or agent's file reference 32393	FOR FURTHER ACTION See paragraphs 1 and 4 below
International application No. PCT/CA2006/002017	International filing date 12 December 2006 (12-12-2006) <i>(day/month/year)</i>

Applicant
ENTRUST LIMITED

1. ☒ The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and are transmitted herewith.

Filing of amendments and statement under Article 19 :

The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46) :

When? The time limit for filing such amendments is normally two months from the date of transmittal of the international search report.

Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes
1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70

For more detailed instructions, see the notes on the accompanying sheet.

2. ☐ The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.

3. ☐ With regard to the protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that :

☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.

☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**

Shortly after the expiration of **18 months** from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90bis.1 and 90bis.3, respectively, before the completion of the technical preparations for the international publication.

The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. These comments would also be made available to the public but not before the expiration of 30 months from the priority date.

Within **19 months** from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until **30 months** from the priority date (in some Offices even later); otherwise, the applicant must, within **20 months** from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.

In respect of other designated Offices, the time limit of **30 months** (or later) will apply even if no demand is filed within 19 months.

See the Annex to Form PCT/IB/301 and, for details about the applicable time limits, Office by Office, see the *PCT Applicant's Guide*, Volume II, National Chapters and the WIPO Internet site.

Name and mailing address of the ISA/CA Canadian Intellectual Property Office Place du Portage I, C114 - 1st Floor, Box PCT 50 Victoria Street Gatineau, Quebec K1A 0C9 Facsimile No.: 001-819-953-2476	Authorized officer Carole Millaire 819-994-6587
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NOTES TO FORM PCT/ISA/220

These Notes are intended to give instructions concerning the filing of amendments under Article 19. The Notes are based on the requirements of the Patent Cooperation Treaty, the Regulations and the Administrative Instructions under that Treaty. In case of discrepancy between these Notes and those requirements, the latter are applicable. For more detailed information, see also the *PCT Applicant's Guide*, a publication of WIPO.

In these Notes, "Article," "Rule" and "Section" refer to the provisions of the PCT, the PCT Regulations and the PCT Administrative Instructions, respectively.

INSTRUCTIONS CONCERNING AMENDMENTS UNDER ARTICLE 19

The applicant has, after having received the international search report and the written opinion of the International Searching Authority, one opportunity to amend the claims of the international application. It should however be emphasized that, since all parts of the international application (claims, description and drawings) may be amended during the international preliminary examination procedure, there is usually no need to file amendments of the claims under Article 19 except where, e.g. the applicant wants the latter to be published for the purposes of provisional protection or has another reason for amending the claims before international publication. Furthermore, it should be emphasized that provisional protection is available in some States only (see *PCT Applicant's Guide*, Volume I/A, Annexes B1 and B2).

The attention of the applicant is drawn to the fact that amendments to the claims under Article 19 are not allowed where the International Searching Authority has declared, under Article 17(2), that no international search report would be established (see *PCT Applicant's Guide*, Volume I/A, paragraph 296).

What parts of the international application may be amended?

Under Article 19, only the claims may be amended.

During the international phase, the claims may also be amended (or further amended) under Article 34 before the International Preliminary Examining Authority. The description and drawings may only be amended under Article 34 before the International Preliminary Examining Authority.

Upon entry into the national phase, all parts of the international application may be amended under Article 28 or, where applicable, Article 41.

When? Within 2 months from the date of transmittal of the international search report or 16 months from the priority date, whichever time limit expires later. It should be noted, however, that the amendments will be considered as having been received on time if they are received by the International Bureau after the expiration of the applicable time limit but before the completion of the technical preparations for international publication (Rule 46.1).

Where not to file the amendments?

The amendments may only be filed with the International Bureau and not with the receiving Office or the International Searching Authority (Rule 46.2).

Where a demand for international preliminary examination has been/is filed, see below.

How? Either by cancelling one or more entire claims, by adding one or more new claims or by amending the text of one or more of the claims as filed.

A replacement sheet must be submitted for each sheet of the claims which, on account of an amendment or amendments, differs from the sheet originally filed.

All the claims appearing on a replacement sheet must be numbered in Arabic numerals. Where a claim is cancelled, no renumbering of the other claims is required. In all cases where claims are renumbered, they must be renumbered consecutively (Section 205(b)).

The amendments must be made in the language in which the international application is to be published.

What documents must/may accompany the amendments?

Letter (Section 205(b)) :

The amendments must be submitted with a letter.

The letter will not be published with the international application and the amended claims. It should not be confused with the "Statement under Article 19(1)" (see below, under "Statement under Article 19(1)").

The letter must be in English or French, at the choice of the applicant. However, if the language of the international application is English, the letter must be in English; if the language of the international application is French, the letter must be in French.

NOTES TO FORM PCT/ISA/220 (continued)

The letter must indicate the differences between the claims as filed and the claims as amended. It must, in particular, indicate, in connection with each claim appearing in the international application (it being understood that identical indications concerning several claims may be grouped), whether

- (i) the claim is unchanged;
- (ii) the claim is cancelled;
- (iii) the claim is new;
- (iv) the claim replaces one or more claims as filed;
- (v) the claim is the result of the division of a claim as filed.

The following examples illustrate the manner in which amendments must be explained in the accompanying letter :

1. [Where originally there were 48 claims and after amendment of some claims there are 51]:
"Claims 1 to 29, 31, 32, 34, 35, 37 to 48 replaced by amended claims bearing the same numbers; claims 30, 33 and 36 unchanged; new claims 49 to 51 added."
2. [Where originally there were 15 claims and after amendment of all claims there are 11]:
"Claims 1 to 15 replaced by amended claims 1 to 11."
3. [Where originally there were 14 claims and the amendments consist in cancelling some claims and in adding new claims]:
"Claims 1 to 6 and 14 unchanged; claims 7 to 13 cancelled; new claims 15, 16 and 17 added." or
"Claims 7 to 13 cancelled; new claims 15, 16 and 17 added; all other claims unchanged."
4. [Where various kinds of amendments are made]:
"Claims 1-10 unchanged; claims 11 to 13, 18 and 19 cancelled; claims 14, 15 and 16 replaced by amended claim 14; claim 17 subdivided into amended claims 15, 16 and 17; new claims 20 and 21 added."

"Statement under Article 19(1)" (Rule 46.4)

The amendments may be accompanied by a statement explaining the amendments and indicating any impact that such amendments might have on the description and the drawings (which cannot be amended under Article 19(1)).

The statement will be published with the international application and the amended claims.

It must be in the language in which the international application is to be published.

It must be brief, not exceeding 500 words if in English or if translated into English.

It should not be confused with and does not replace the letter indicating the differences between the claims as filed and as amended. It must be filed on a separate sheet and must be identified as such by a heading, preferably by using the words "Statement under Article 19(1)."

It may not contain any disparaging comments on the international search report or the relevance of citations contained in that report. Reference to citations, relevant to a given claim, contained in the international search report may be made only in connection with an amendment of that claim.

Consequence if a demand for international preliminary examination has already been filed

If, at the time of filing any amendments and any accompanying statement, under Article 19, a demand for international preliminary examination has already been submitted, the applicant must preferably, at the time of filing the amendments (and any statement) with the International Bureau, also file with the International Preliminary Examining Authority a copy of such amendments (and of any statement) and, where required, a translation of such amendments for the procedure before that Authority (see Rules 55.3(a) and 62.2, first sentence). For further information, see the Notes to the demand form (PCT/IPEA/401).

If a demand for international preliminary examination is made, the written opinion of the International Searching Authority will, except in certain cases where the International Preliminary Examining Authority did not act as International Searching Authority and where it has notified the International Bureau under Rule 66.1bis(b), be considered to be a written opinion of the International Preliminary Examining Authority. If a demand is made, the applicant may submit to the International Preliminary Examining Authority a reply to the written opinion together, where appropriate, with amendments before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later (Rule 43bis.1(c)).

Consequence with regard to translation of the international application for entry into the national phase

The applicant's attention is drawn to the fact that, upon entry into the national phase, a translation of the claims as amended under Article 19 may have to be furnished to the designated/elected Offices, instead of, or in addition to, the translation of the claims as filed.

For further details on the requirements of each designated/elected Office, see the *PCT Applicant's Guide*, Volume B.

PATENT COOPERATION TREATY
PCT
INTERNATIONAL SEARCH REPORT
(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 32393	FOR FURTHER ACTION	see Form PCT/ISA/220 as well as, where applicable, item 5 below
International application No. PCT/CA2006/002017	International filing date (<i>day/month/year</i>) 12 December 2006 (12-12-2006)	(Earliest) Priority date (<i>day/month/year</i>) 12 December 2005 (12-12-2005)
Applicant ENTRUST LIMITED		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 4 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**

a. With regard to the language, the international search was carried out on the basis of:

☒ the international application in the language in which it was filed

☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))

b. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I

2. ☐ Certain claims were found unsearchable (see Box No. II)

3. ☐ Unity of invention is lacking (see Box No. III)

4. With regard to the title,

☒ the text is approved as submitted by the applicant

☐ the text has been established by this Authority to read as follows :

5. With regard to the abstract,

☒ the text is approved as submitted by the applicant

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority

6. With regard to the drawings,

a. the figure of the drawings to be published with the abstract is Figure No. 1

☒ as suggested by the applicant

☐ as selected by this Authority, because the applicant failed to suggest a figure

☐ as selected by this Authority, because this figure better characterizes the invention

b. ☐ none of the figures is to be published with the abstract

A. CLASSIFICATION OF SUBJECT MATTER IPC: <i>H04L 9/32</i> (2006.01) , <i>H04L 12/16</i> (2006.01) According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC: <i>H04L</i> (2006.01)		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic database(s) consulted during the international search (name of database(s) and, where practicable, search terms used) Canadian Patent Database, JEEExplore, Delphion, Google.		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2005/0144449 A1 (VOICE), 30 June 2005 (30.06.2005) see entire document	1-106
A	CA 2 193 819 C (JONSSON et al), 04 January 1996 (04.01.1996) see entire document	1-106
A	US 5,491,752 A (KAUFMAN et al), 13 February 1996 (13.02.1996) see entire document	1-106
A	US 6,732,277 B1 (VANDERGEEST et al), 4 May 2004 (4.05.2004) see entire document	1-106
A	US 6,934,838 B1 (BOYCE et al), 23 August 2005 (23.08.2005) see entire document	1-106
A	US 6,950,949 B1 (GILCHRIST), 27 September 2005 (27.09.2005) see entire document	1-106
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.		
* Special categories of cited documents :		
"A"	document defining the general state of the art which is not considered to be of particular relevance	"I" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E"	earlier application or patent but published on or after the international filing date	"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O"	document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P"	document published prior to the international filing date but later than the priority date claimed	
Date of the actual completion of the international search 12 March 2007 (12-03-2007)		Date of mailing of the international search report 30 March 2007 (30-03-2007)
Name and mailing address of the ISA/CA Canadian Intellectual Property Office Place du Portage I, C114 - 1st Floor, Box PCT 50 Victoria Street Gatineau, Quebec K1A 0C9 Facsimile No.: 001-819-953-2476		Authorized officer Jamie Hayami 819- 934-2670

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A, P	US 6,975,727 (VANDERGEEST), 13 December 2005 (13.12.2005) see entire document	1-106

INTERNAT AL SEARCH REPORT
Information on patent family members

International application No.
PCT/CA2006/002017

Patent Document Cited in Search Report	Publication Date	Patent Family Member(s)	Publication Date
US2005144449	30-06-2005	AU2004319571 A1	24-11-2005
		CA2566895 A1	24-11-2005
		CN1848723 A	18-10-2006
		EP1751912 A1	14-02-2007
		US2005144450 A1	30-06-2005
		US2005144451 A1	30-06-2005
		US2005149761 A1	07-07-2005
		US2006015725 A1	19-01-2006
		US2006156385 A1	13-07-2006
		US2007005967 A1	04-01-2007
		WO2005065963 A1	21-07-2005
		WO2005112337 A1	24-11-2005
		WO2006042392 A1	27-04-2006
CA2193819	04-01-1996	AU692881B B2	18-06-1998
		AU2688795 A	19-01-1996
		CN1085025C C	15-05-2002
		DE69534687D D1	19-01-2006
		DE69534687T T2	20-07-2006
		EP0766902 A2	09-04-1997
		FI115107B B1	28-02-2005
		JP10502195T T	24-02-1998
		JP2006344240 A	21-12-2006
		US5668876 A	16-09-1997
		WO9600485 A2	04-01-1996
US5491752	13-02-1996	US5373559 A	13-12-1994
US6732277	04-05-2004	NONE	
US6934838	23-08-2005	NONE	
US6950949	27-09-2005	NONE	
US6975727	13-12-2005	NONE	

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:
MACRAE & CO.
P.O. Box 806
Station B
OTTAWA, Ontario
Canada, K1P 5T4

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing 30 March 2007 (30-03-2007)
(day/month/year)

Applicant's or agent's file reference
32393

FOR FURTHER ACTION
See paragraph 2 below

International application No.

PCT/CA2006/002017

International filing date (day/month/year)

12 December 2006 (12-12-2006)

Priority date (day/month/year)

12 December 2005 (12-12-2005)

International Patent Classification (IPC) or both national classification and IPC
IPC: *H04L 9/32* (2006.01), *H04L 12/16* (2006.01)

Applicant
ENTRUST LIMITED

DOCKETED

CLIENT *Entrust*
FILE NO. *10500.33.0317*

1. This opinion contains indications relating to the following items:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Box No. I | Basis of the opinion |
| <input type="checkbox"/> Box No. II | Priority |
| <input type="checkbox"/> Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input type="checkbox"/> Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> Box No. V | Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> Box No. VI | Certain documents cited |
| <input checked="" type="checkbox"/> Box No. VII | Certain defects in the international application |
| <input checked="" type="checkbox"/> Box No. VIII | Certain observations on the international application |

DATE *6/30/07*
Referred to Written Opinion
BY *L.H.* DATE *4/18/07*

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/CA
Canadian Intellectual Property Office
Place du Portage I, C114 - 1st Floor, Box PCT
50 Victoria Street
Gatineau, Quebec K1A 0C9
Facsimile No.: 001-819-953-2476

Date of completion of this opinion

15 March 2007 (15-03-2007)

Authorized officer

Jamie Hayami 819- 934-2670

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of:

☒ the international application in the language in which it was filed

☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

☐ a sequence listing

☐ table(s) related to the sequence listing

b. format of material

☐ on paper

☐ in electronic form

c. time of filing/furnishing

☐ contained in the international application as filed.

☐ filed together with the international application in electronic form

☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statement that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

Description: pages 1-60 as originally filed

Claims: 1-106 as originally filed

Drawings: 1/34-34/34 as originally filed

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims <u>1-106</u>	YES
	Claims <u>None</u>	NO
Inventive step (IS)	Claims <u>1-106</u>	YES
	Claims <u>None</u>	NO
Industrial applicability (IA)	Claims <u>1-106</u>	YES
	Claims <u>None</u>	NO

2. Citations and explanations :

The claimed invention relates to a method and apparatus for providing authentication between a user and a target resource or information sending entity that employs soft tokens or hard tokens for providing mutual authentication between a user and a target resource.

This opinion is based on the originally filed claims 1-106.

The following relevant document appears in the International Search Report:

D1: US 2005/0144449 A1

D1 discloses a method and apparatus for providing mutual authentication between a user and a sending unit.

The following observations are made:

Article 33(2) PCT - Novelty

Since no single prior art document discloses the exact features of claims 1-106, the subject-matter of claims 1-106 are novel under Article 33(2) PCT.

Article 33(3) PCT - Inventive Step

In regards to the present invention, D1, which is considered to represent the most relevant state of the art, discloses the features of generating a challenge for user authentication, using location information located on an article (translucent identification member), wherein the location information corresponds to row and column identifiers and sending the generated challenge for use in an authentication of a user to a sender (D1: see entire document). D1, however, fails to disclose the feature of having a challenge data element from a stored pool of challenge data elements, the challenge being based on rule data and stored usage data with at least some of the challenge data elements in a stored pool of challenge data elements as disclosed in independent claim 1. Independent claims 24, 36, 47, 55, 68, 81, and 94 also include the aforementioned features of independent claim 1.

Therefore, the subject-matter of claims 1-106 involve an inventive step under Article 33(3) PCT.

Article 33(4) PCT - Industrial Applicability

The subject-matter of claims 1-106 are considered to have industrial applicability and fulfill the requirements of Article 33(4) PCT.

Box No. VII *Certain defects in the international application*

The following defects in the form or contents of the international application have been noted :

Description

The description does not comply with Rule 5.1(a) of the PCT. The description shall disclose the alleged invention in such terms that the technical problem and its solution can be understood. The description is missing the brief description of the invention.

Drawings

The drawings and/or the description do not comply with Rule 11.13(l) of the PCT. Reference signs not mentioned in the description shall not appear in the drawing, and vice versa.

In the drawings, reference numerals 304 (fig. 3), 809 (fig. 8), 1008 (fig. 10), 1302 (fig. 12), 3002 (fig. 35), 3316 (fig. 36), 3512 (fig. 37, 38) are shown, however they do not appear in the description.

On page 37, line 29 of the description, database 2404 is mentioned, however it does not appear in the drawings. It appears that in figure 24, there is a typo and database "2402" should read as "2404".

Box No. VIII **Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made :

Description Informalities

The description does not comply with Article 5 of the PCT. The http internet address provided on page 3, line 29 is not a static electronic file. The information disclosed in said file can change and therefore is not reliable. Therefore, a person skilled in the art is not fully enabled to practice the alleged invention of the present application.

Clerical Errors

On page 19, line 7, "translucent identification member 38" should read as --translucent identification member 14--.

On page 21, line 3, "block 204" should read as --block 304--.

On page 23, line 19, "suitable server 810" should read as --suitable server 809--.

On page 25, line 27, "user name 1402" should read as --user name 1302--.

On page 47, line 29, "FIG. 313" should read as -- FIG. 33--.